



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/868,379

08/15/2001

Christian Kropf

2006-219/H03763

8884

55495

7590

04/30/2008

PAUL & PAUL

2000 MARKET STREET

PHILADELPHIA, PA 19103-3229

EXAMINER

ROBERTS, LEZAH

ART UNIT

PAPER NUMBER

1612

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/868,379 | Applicant(s) KROPF ET AL. | |
| | Examiner LEZAH W. ROBERTS | Art Unit 1612 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9,13-16 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8, 9, 13-16 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>21 Feb 2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Request for Continued Examination filed February 4, 2008. All previous rejections have been withdrawn unless stated below.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Declaration

The Declarations filed on February 4, 2008 under 37 CFR 1.132 has been considered but is ineffective to overcome the Rudin et al. reference.

The declaration by Christian Kropf asserts the compositions of Rudin et al. use "pure" hydroxy apatite and not surface treated hydroxyapatite as recited by the instant claims.

The Examiner does not refute that the reference of Rudin et al. discloses "pure hydroxyapatite. The previous rejection is an obviousness rejection under USC 103(a). The secondary reference of Baines et al. gives motivation as to why one of ordinary skill in the art would want to treat the surface of the hydroxyapatite particles when the particles are on a nanometer scale. The combination of the references makes the previously submitted claims obvious over the combination of the reference not Rudin et al. on its own. The rejection is being withdrawn necessitated by Applicant's amendments to the claims and therefore a new rejection has been set forth below.

Claims

Claim Rejections - 35 USC § 103 - Obviousness (New Rejection)

Claims 8, 9, 13-16 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudin et al. (US 6,919,070) in view of Bagchi et al. (US 5,560,932).

Rudin et al. has been discussed in length in previous office actions. Humectants are included in the compositions and comprise 0 to 80% of the compositions (col. 3, lines 19-25). The reference differs from the instant claims insofar as it does not disclose surface treatment of the inorganic particles (hydroxyapatite and other abrasives) contained in its dentifrice compositions.

Bagchi et al. disclose pharmaceutical particles having an extremely small effective average particle size can be prepared by homogeneous nucleation and precipitation in the presence of a surface modifier and that such particles are stable and do not appreciably flocculate or aggregate due to interparticle attractive force (col. 4, lines 41-50). Surface modifying agents include gelatin, casein, polyethylene glycols, polyoxyethylene stearates, colloidal silicon dioxide, phosphates, sodium dodecylsulfate, carboxymethylcellulose calcium, carboxymethylcellulose sodium, methylcellulose, hydroxyethylcellulose and hydroxypropylcellulose (col. 5, lines 44-56). The particles have a particle size of less than 400nm to less than 100 nm (col. 6, lines 28-50). The reference differs from the instant claims insofar it does not disclose the particles are hydroxyapatite of the compositions are oral care compositions.

Although the secondary reference does not specifically disclose dental abrasives, it is still applicable to the instant case because it gives a general teaching of how small

Art Unit: 1612

particles aggregate due to interparticle attractive forces. This appears to be based on the physical characteristic of the particle and not its chemical makeup. Therefore it would apply not only to pharmaceuticals but also to dental abrasives.

That being said, it would have been obvious to one of ordinary skill in the art to have used surface modifiers to coat the hydroxyapatite of the primary reference motivated by the desire to stabilize the particles and to inhibit aggregation due to interparticle attractive force as disclosed by the secondary reference.

Claims 8, 9, 13-16 and 20-25 are rejected.

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEZAH W. ROBERTS whose telephone number is (571)272-1071. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick F. Krass can be reached on 571-272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lezah W Roberts/
Examiner, Art Unit 1612

/Frederick Krass/
Supervisory Patent Examiner, Art Unit 1612